APPENDIX III
FLOOD AND COASTAL STORM DAMAGE REDUCTION BUSINESS LINE
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APPENDIX III
FLOOD & COASTAL STORM DAMAGE REDUCTION

III-1. Background. The Corps has had the mission of reducing flood damages from the mid- 1800's. Today we plan, design, implement and operate projects that reduce damages from both riverine and coastal flooding. Many of the projects provide other outputs such as hydropower, water supply, ecosystem restoration and recreation. Corps flood and coastal storm damage reduction (F&CSDR) efforts range from technical assistance to small, local protection projects (levees or non-structural flood damage reduction measures) to major dams. Today, most Corps constructed flood protection projects are owned and operated by sponsoring cities, towns, and agricultural districts. However, the Corps continues to maintain and operate 383 dams and reservoirs for flood damage reduction as well as some levee systems and is authorized to continue shore re-nourishment at over 90 hurricane and storm damage reduction (Coastal and Great Lakes) projects. As regions continue to develop, populations increase, economic development in low lying area is more advantageous. Thus, the need for flood protection becomes of paramount importance.

III-2. Purpose. The Corps F&CSDR goal is to reduce the Nation's flood risk by investing in flood and coastal storm damage reduction solutions in environmentally sustainable ways when the benefits exceed the costs. Our program enhances the quality of American life by reducing flood risk to both life and property, providing additional benefits to individuals, communities, and the national economy.

III-3. Civil Works Program Objectives.

a. The Civil Works (CW) Strategic Plan, dated March 2004 was developed with an explicit assumption of an unconstrained resource environment to encourage an unconstrained assessment of the nation's water resources needs and potential Corps response. Preparation of the FY 2009 Budget Request requires the recognition of a constrained budget environment and the ongoing effort to evolve better budget linked performance measures. Table III-1 presents program objectives, performance measures and/or performance ranking and rating criteria which support and/or supplement the CW program objectives and performance measures for the F&CSDR to reflect the near term realities of a constrained FY 2009 budget environment.

b. The Civil Works Five Year Development Plan (CW FYDP) purpose is to present an overview on how the funding for the Civil Works program over a five-year period will produce results that contribute to achievement of the strategic goals and objectives in the Civil Works Strategic Plan. See paragraph 6 (a) (2) "Civil Works Five Year Development Plan". The Five Year Development Plan (FYDP) for the Flood and Coastal Storm Damage Reduction (F&CSDR) business line provides a regional (System and/or Watershed) management tool for use in accomplishing the Corps of Engineers' flood and storm damage reduction mission while providing the budgetary framework necessary for program development. They present an opportunity to objectively evaluate planning, design, construction, and operations and maintenance phases of new, continuing, and existing projects broken down into the three major appropriations and including the Mississippi River and Tributaries (MR&T).

III-4. Performance Measures.

a. The Corps F&CSDR program is well established and valued, however our ability to continue to reduce flood risks to meet the needs of current and future generations is dependent upon adequate investments. Such investments provide for the necessary investigations of problems and development of projects, timely implementation of authorized projects, proper inspections of Corps and local projects, preventative maintenance or facility modernization or improvement, improvements to ensure the reliability and safety of projects, adequate data collection or improvements to increase operational efficiencies. The purpose of this budget guidance is to ensure the development of convincing rationale

and justification of the budget request to accomplish the goal of reducing flood risk while meeting prescribed targets.

b. Accordingly, a nationwide perspective must be maintained to assure that available funding provides the greatest public benefit for the investment. Effective risk management requires an inventory of each class of assets, some form of standardized condition assessment, and a method to evaluate the reliability of these assets and consequences of unsatisfactory performance. But to effectively balance tradeoffs and integrate mission objectives through a risk management approach will require some common objectives or metrics and an integrated framework. Risk management evaluates which risks identified in the risk assessment process require management and selects and implements the plans or actions that are required to ensure that those risks are controlled. These risks must be communicated effectively to our stakeholders. Risk communication take place and involve an interactive dialogue between stakeholders and risk assessors and risk managers which actively informs the other processes.

c. The safety and security of our critical and existing infrastructure must be maintained, new investigations to address serious flood risks must be conducted and our uncompleted projects must be brought on line quickly so that benefits may be achieved as soon as possible. To achieve the F&CSDR program goal, the following budget objectives and ranking criteria are established for the FY 2009 program. Each of the objectives and criteria are designed to demonstrate that each budget item makes sense and contributes to the CW objectives and the F&CSDR program goal.

TABLE III-1
Performance Measures and Budget Ranking Criteria

CW Strategic Goal/Objective	Budget Objective	Metric
1.1, 1.2 and 1.3	Keep ongoing studies or PEDs going if likely to produce recommendation for project (I) or start new phase of studies or PED (I) to address critical needs	• Date of agreement – executed or expected • Population at Risk (*PAR*) • Population Affected *(POP AFFECTED)* • Combined flood risk factors (depth, velocity and warning time, *PAR* or *TPAR*) • Estimated average annual damages (without project) • Benefit to Cost Ratio – only for PED • System or Watershed study score
1.3	Complete ongoing construction to start getting benefits and reduce future flooding impacts with new construction (C)	• Benefits Cost Ratio (*BCR*) for project • Net Benefits • Other purpose outputs by BL (ENR, REC, WS) • Combined risk factors (depth, velocity and warning time, *PAR* or *TPAR*)
5.1	Initiate and complete dam safety projects (C) Conduct dam and levee safety, seepage or static instability studies (C)	• Relative Risk of failure – risk compared to other Corps dams (Dam Safety Action Classifications (*DSAC)*) • Condition Classification, Consequence Category, Relative Risk Matrix Value • Population at Risk (*PAR*) • Population Affected *(POP AFFECTED)*

TABLE III-1
Performance Measures and Budget Ranking Criteria

CW Strategic Goal/Objective	Budget Objective	Metric
3.1	Operations - Assure that projects perform as designed (O&M)	• % of design level available (may be less than 100% due to reduced conveyance, pool restrictions or storage limits, seepage, or other reduced level of protection)% of design level available (reduced conveyance, pool restrictions, seepage (levees), reduced level of protection) • O Index as total damages prevented divided by cumulative O costs (HQ will calculate) • % of all required inspections, surveys that can be accomplished with a given budget increment
3.1	Maintenance - Assure that projects perform as designed (O&M)	• Condition Classification, Consequence Category, Relative Risk Matrix Value • % of design level available (may be less than 100% due to reduced conveyance, pool restrictions or storage limits, seepage, or other reduced level of protection) • M Index as total damages prevented divided by cumulative M costs (HQ will calculate) • Special legal mandates – Y or N (describe in remarks) • Safety issues – Y or N (describe in remarks)

III-5. Budget Increments and Ranking. In order to achieve the objectives shown in Table III-1, budget increments have been established to assure uniformity across the country in building annual budgets from the same point. Budget increments reflect the eligibility criteria described in the following paragraphs. Increment 1 (Initial) will receive priority consideration for budget development. Increment I will receive priority consideration for budget formulation and is the business lines "initial" program. Other increments are described in detail in the Definition/Glossary section in the main EC. These increments in conjunction with the business line budget objectives and ranking criteria will assist in making informed and wise budgetary decisions to support the F&CSDR business line goals. All increments must be prioritized by each MSC and across appropriations except for increment "9" which is not budgetable.

Ranking of the program will be based performance measures and risk-based indices as indicated in Table III-1 and detailed information provided in the F&CSDR data spreadsheet. In order to address the on-going Dam Safety Program, dam safety projects will be ranked using the Dam Safety Action Classifications (*DSAC)* values and as established by HQUSACE. These classifications have been determined for USACE dams which have undergone Screening for Portfolio Risk Assessment (*SPRA*) by agency dam safety experts, and concurred with by USACE Senior leaders. **See ANNEX B CONSTRUCTION AND FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES - Dam Safety**

Assurance & Seepage/Stability Correction Program, paragraph B-2.5, Table B-1 for *DSAC* definitions and Annex C – Project Operation and Maintenance – Dam Safety, paragraph C-2.2.g.

a. Systems Approach and Risk Management

1. Consistent with the Civil Works Strategic Plan a systems approach or watershed approach is needed to ensure that investments are integrated into a whole that preserves or enhances performance and sustainability at the system level.

a) This requires consideration of the investment needs and priorities of all the business lines within the watershed. A systems based approach is a logical step toward coordination and focusing on requirements for making informed investments while providing maximized benefits to the public. It provides the structure for managing entire systems rather than separate elements.

b) Systems and/or watershed principles approach flood risk management on a system-wide basis, taking into account varied land use, and flood risk reduction needs. They integrate planning and flood risk management while promoting regional funding and planning which offer regional benefits and information for making wise investments, in order to provide maximized safety to communities and stakeholders. HQUSACE has established a national Dam and Levee Safety Program for studies, construction and interim risk reductions measures and long-term investments plans to minimize risk at high risk projects. These investments are captured through long range planning and multi-year development plans.

c) All FY 2009 budget item requests (studies, construction, and O&M) shall be based on each MSC FYDP and using systems and watershed principles which will include the a System codes and USGS Hydrologic Unit Classification (*HUC*) sub-region (4 digits) codes. USGS HUC codes may be found at **http://water.usgs.gov/GIS/huc_name.html** and the System codes are found in the Annex C – "Operations and Maintenance "

d) MSCs will identify all systems and watersheds within their respective regions of the US and develop budget priorities that are consistent with investing in one or more of the following aspects of the system; in the highest risk portions of the system; that will result in the most improvement in performance; that contribute to increased reliability and safety; that contribute to increased flood damages prevented; that contribute to addressing significant regional or national ecological problems.

e) A system will generally be identified as a watershed, and may include multiple individual projects and components. Some large watersheds could be comprised of more than one system (e.g. the Mississippi River watershed has the Upper Mississippi River system, the MR&T system, the Ohio River and Tributaries while the Great Lakes is a system itself). Analytical perspectives should be, developed to help determine the mix in FY2009 of investments in maintenance, operations improvements, reallocation, major rehabilitation, new construction, planning, and design that will maximize system efficiency, safety, reliability and sustainability over time.

2. Investigations (I), Construction (C) and Operations and Maintenance (O&M) appropriations

a) Studies (reconnaissance and feasibility) and PEDs for new projects and separable elements that are consistent with policy and have multiple outputs (System, watershed or multi-purpose) will be budgeted in the primary business line. When the project moves into construction, the construction requests and engineering and design during construction activities will be by appropriate business line.

b) System or Watershed Studies - Required only for Reconnaissance phase and Feasibility studies. Studies normally do not fall neatly into anyone business line but overlap one or more such as

Environmental, Water Supply and Ecosystem Restoration. The study may produce a system, watershed or regional needs analysis that identifies opportunities and impediments; a range of alternatives; or a regional or basin-wide strategy that identifies implementable actions for the future for some or all of the stakeholders within the system, watershed or region; or result in a feasibility report for authorization. These studies will be evaluated on the basis of its analytical and relationship components. Any budget request for a study that is in accord with these principles should be scored using the criteria provided below. These criteria have been developed to help identify potentially high performing studies for ranking purposes. This score is in addition to the other scores or ranking criteria for the primary business line but will not be added to those scores. Instead it is intended to be a unique evaluation tool for system, watershed or regional studies.

(1) Relationships:

(a) An established local system, district or watershed structure (Ex. 501 (c) (3) type organization, Conservancy District, etc) that is capable of accepting funds currently exists. This indicates a multi-party organization exists with the resources to make a meaningful contribution to or sponsor the watershed study. …….. 2 points

(b) Aligns the Corps, and/or builds upon existing relationships, with state, tribal, or local governments or other federal agencies…… 1 point

(c) Contributes to the goals of the state, tribal or local jurisdictions and their water resources agencies for improved multi-jurisdictional and integrated water resources management..... 1 point

(2) Analysis:

(a) Encompasses a complete watershed (*HUC* level 4 or cataloging unit – the eight digit *HUC* code. This is the smallest element in the hierarchy of hydrologic units. A cataloging unit is a geographic area representing part of all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature. There are 2264 Cataloging Units in the Nation.)…….2 points

(b) Encompasses integrated problem solving, not just water resources but also transportation, recreation, economic development, regional and other social effects, or other challenges that state, tribal or local governments are facing in today's real world…… 2 points

(c) A combination of recommended actions addressing multiple challenges to be undertaken by various partners and stakeholders is identified and may result in a System or Watershed Management Plan. …… 2 points

(d) Integrates and/ or supports the regulatory function within the context of system, regional or watershed planning…… 2 points

c) Combined Flood Risk Factors capture the non-monetary aspects of flood damage reduction projects. The depth, velocity and warning time factors should be assessed for the with-out project condition and should be representative of the average hydrologic conditions in the project area. They should represent conditions in the flooded area that are, in general, the most likely to cause severe injury or loss of life. Similarly, the population and threaten population at risk (*PAR and TPAR*) help quantify the potential population in the affected area. Special considerations should be highlighted in the Risk Remarks field. A proxy for residual economic damages will be calculated from the Average Annual Damages and Average Annual FDR Benefits fields.

d) The Operations and Maintenance (O&M) budget will be formulated on a system and watershed basis using the HQUSACE System codes and 4-digit *HUC* codes and, if Congress concurs on the benefit of planning and carrying out the O&M program in accordance with system-wide priorities, the O&M program would be managed by systems and business line, rather than project-project. Therefore, the O&M program should be developed to help determine the mix in FY2009 of investments in maintenance and operations improvements using a system based approach for O&M budget item requests and consistent with each Division/District Infrastructure Management Plan. This will allow managers in the field more flexibility to address uncertainties and change conditions throughout the fiscal year, consistent with budget and appropriations decisions and will maximize system efficiency, safety, reliability and sustainability over time.

e) A risk assessment involves identifying sources of potential conditions, assessing the likelihood or confidence level that they will occur and the consequences if it does occur. Project condition classifications for budget requests shall be developed for each project/maintenance budget item in accordance with the Table III-2. These classifications will provide for the initial basis for capturing the true state of the infrastructure or component thereof. In addition, these classifications provide the foundation for managing USACE infrastructure uniformly and consistently using asset management principles, systems and risk-based condition indices for operating and maintaining projects while directly embracing the Program Assessment Rating Tool initiative.

f) Unsatisfactory performance does not necessarily include catastrophic failure, but rather poor performance under a given condition or operations and under constraints resulting in a reduction of project benefits or preventing the project from fully operating as authorized. In order to capture and incorporate the “consequences” effects of unsatisfactory performance, a series of factors have been developed. These factors represent the potential impacts to the project from a national, regional and local perspective and are defined in Table III-3. These factors include the Dam Safety Action Class *(DSAC)* classification, the population at risk (*PAR*) in the affected area of the facility, the disruptive and economic impacts, and potential environmental mitigation costs.

g) The Population At Risk *(PAR)* is defined as the number of people (lives, works, transits) located in the floodplain without the project in place. The Population Affected *(POP AFFECTED)* is the number of people (lives, works, transits) located in the floodplain *(subset of the PAR)* afforded risk reduction by the project at its design level. In addition, as a factor used to assess combined risk, Threaten Population At Risk *(TPAR)* is defined as a subset of the *PAR* which represents the residual population or number of people who remain in the flood plain for a flood event greater that the project design event.

TABLE III-2 Performance Reliability Assessment Standards	
Condition Classification	**Definitions**
A Adequate	- There is a high level of confidence that the feature will perform well under the designed operating conditions. This confidence level is supported by data, studies or observed project characteristics which are judged to meet current engineering or industry standards. - There is a limited probability that the verified degraded conditions will cause an inefficient operation, or degradation or lose of service.
B Probably Adequate	- There is a low level of confidence that the feature will perform well under designed operating conditions, and may not specifically meet engineering or industry standards. The feature may require additional investigation or studies to confirm adequacy. - There is a low probability that the verified degraded conditions will result in inefficient operation, or degradation or loss of service.
C Probably Inadequate	- There is a low level of confidence that the feature will not perform well under designed operating conditions, and may not specifically meet engineering or industry standards. The feature may require additional investigation or studies to confirm adequacy. The feature does not meet current engineering or industry standards. - There is a moderate probability that the verified degraded conditions will result in inefficient operation, or degradation or loss of service
D Inadequate	- There is a high level of confidence that the feature will not perform well under designed operating conditions. Physical signs of distress and deterioration are present. Analysis indicates that factors of safety are near limit state. The feature deficiencies are serious enough that the feature no longer performs at a satisfactory level of performance or service. - There is a high probability that the verified degraded conditions will result in inefficient operation, or degradation or loss of service**.**
F Failed	- The feature has FAILED - Historically the feature regularly experiences scheduled or unscheduled closures or loss of service for repairs.

h) Table III-2 and Table III-3 together form the basis of the “Relative Risk” based methodology which supports the Corps risk-based direction for making investments decisions.

i) The “Relative Risk” matrix box values are determined from Table III-4 using both the “Condition Classification” and the “Consequence Category” values established for each project or budget item. Note that more than one project/item can populate a box. Matrix values will be used is making informed and wise investments, minimizing risk and providing maximized benefits to the public. Ranking of within each box (if required) will be determined as appropriate and based supporting justification from the MSC for projects at appear to be “out of place” in their matrix table.

TABLE III-3 Consequence Rating Criteria	
Category	**Definitions**
I	PAR ➔ >100,000, TPAR ➔ >1,000 National to Multi-Region/Basin disruption of essential facilities and access. Economic Impact-Massive Losses (>$1B). Impact-National Massive environmental mitigation cost.
II	PAR ➔ 50,000 to 100,000, TPAR ➔ 500 to 1,000 Multi-Regional/Basin disruption of essential facilities and access. Economic Impact-Multi-regional losses. ($500M to $1B) major public and private facilities. Very large environmental mitigation cost.
III	PAR ➔ 25,000 to 50,000, TPAR ➔ 250 to 500 Regional disruption of essential facilities and services Economic Impact-Regional losses, ($250M to $500M). Large environmental mitigation cost.
IV	PAR ➔ 10,000 to 25,000, TPAR ➔ 125 to 250 Local to Regional disruption of essential facilities and access. Economic Impact-local to regional (>$125M to $250M). Medium Environmental mitigation cost.
V	PAR ➔ <10,000, TPAR ➔ <125 Local disruption of essential facilities and access. Economic Impact-local to regional (<$125M). Minimal to no Environmental mitigation cost.

j) It is critical that an honest, defendable assessment and evaluation of each project be made for the ranking process in order to accurately provide a snapshot of where scarce resources need to be allocated to provide for;

- a “risk-based” solution
- efficient, effective, reliable and safe operations for projects and facilities in accordance with their authorized purposes; and
- the unmet F&CSDR business line needs.

TABLE III-4

Relative Risk Ranking Matrix

Consequence \ Condition	Condition Classification				
	F (Failed)	D (Inadequate)	C (Probably Inadequate)	B (Probably Adequate)	A (Adequate)
Consequence Category I	1	2	4	7	15
Consequence Category II	3	5	8	11	20
Consequence Category III	6	9	12	14	22
Consequence Category IV	10	13	16	18	24
Consequence Category V	17	19	21	23	25

- High Consequence, Low Reliability (Failed)
- Med-High Consequence, Low-Med Reliability (Inadequate)
- Medium Consequence, Medium Reliability (Probably Inadequate)
- Low Consequence, Med-High Reliability (Probably Adequate)
- Minimal Consequences, High Reliability (Adequate)

b. Initial Increment. The initial program is the first business line increment (Increment 1) for the business line. Budget items must comply with the following rules for each appropriation as follows:

1. Investigations (I)

a) Studies and pre-construction engineering and design (PED) and design of specifically authorized and MR&T investigations are considered in the Investigations appropriation.

b) For new start or continuing PED projects, project economics must be justified as indicated in paragraph 10 b. (1) (a) *"Project Economics".*

c) Seamless PEDs are considered to be a new phase

2. Construction (C)

a) The Construction appropriation includes: specifically authorized projects, replacement projects, initial fill for beach nourishment projects, dam safety projects, deficiency corrections projects and dam safety, seepage, static instability studies (formerly in O&M in FY07) program. For new start or continuing construction projects, project economics must be justified as indicated in paragraph 10 b. (1) (b) *"Project Economics"*.

b) Dam Safety Modification Evaluation Reports for Dam Safety Assurance Projects/Safety, and Seepage/Stability Correction Projects, and Levee Safety projects which the Corps still retains responsibility will be submitted under construction appropriation. Each dam safety assurance study (or group of similar studies for the same project) (WCC = 60233) should be a line item in the submission and identified with phase code (PHASE = SS) and the Dam Safety Action Classification code (DSAC = 1, 2, 3, 4, or 5). Dam Safety Studies will be included after Increment 1. The final determination for Dam Safety studies and projects will be made at HQUSACE.

(1) The PURPOSE field should include what is being studied, the expected report completion date, if not completing in the PY, the additional funding required to complete, and estimated cost (magnitude) of the construction cost. Additional increments may be included but it must be clearly shown what the additional funding would accomplish. In general, the initial increment will be to continue existing contract/proceed at existing level of effort, and additional increments would be to accelerate the work due to criticality of the study.

(2). These individual studies will be submitted and evaluated at HQ with the dam or levee safety staff and ranked accordingly. The highest ranking studies will be combined, by HQ, into "the wedge" as part of the Remaining Items account and included in the final budget presentation. This information is needed for defending the amount of the dam safety "wedge" in the Construction program and the expected overall cost of the dam safety program.

c) Contracts

(1) Each contract included in the initial increment and any additional increments must be shown separately to allow individual funding decisions based on the performance metrics and must be shown in priority order by District and MSC Rank.

(2) All construction contracts will be funded in accordance with Construction Increment Guidance – see Definition/Glossary section of the EC.

(3) Initial Increment. Contract will be fully funded if their estimated total value is $20M or less and includes associated contract management, E&D during construction, and mandatory real estate activities.

3. Operations and Maintenance (O&M)

a) The total of Increment 1 plus Increment 2 represents the minimal program. It will be based on the MSC 5-year average (75% of the amount in Table C 2.2, See Annex C – Operations and Maintenance) by of the O&M President's Budget amount as distributed by MSC. All operations requirements will be submitted separately from maintenance requirements**.**

b) The initial increment (Increment 1) will seek to provide the greatest benefit for the investment consistent with performance measures and sufficient to meet a minimum level of service requirements for operation and maintenance of the existing infrastructure. Minimum level of service is further defined as the ABSOLUTE minimum requirements needed to maintain basic project operations without jeopardizing project purpose and function. The philosophy is to use initial increment as the minimum level of service to account for critical routine operation and maintenance activities. See Definition/Glossary section for O&M Increments definitions.

c) Detailed project descriptions, justifications and purpose of the increment funds strengthen the funding request. Use approved inspection reports (with dates) to strengthen justification.

d) Simple pro-rata allocations by district and / or project will not result in the expected performance based budget and should not be used.

e) Contracts shall be according to current guidance as provided by CECW as contained in EC-11-2-189, current edition.

f) This initial amount is for all MSC's O&M requirements as prioritized below. The following items may be included in the initial increment:

- Minimum Level of Service operations costs (usually dams) – may not be full 24-hour operation on site
- Minimum Level of Service maintenance (usually dams) – not all maintenance needs
- On-going major maintenance – does not include new major maintenance
- Critical routine maintenance – does not include routine maintenance
- Operation and maintenance requirements for Critical Infrastructure Security Program (CISP) projects
- Dam Safety Program. Related work and interim risk reduction measures will be included and prioritized based on the *DSAC* classifications and program implementation guidance. See Annex C – Operations and Maintenance – Dam Safety
  - On-going **(**National Priority studies (dam safety work in Construction) and work) replacements of high risk projects – does not include new replacements initial increment
  - Screening for Portfolio Risk Assessment (each District shall screen 35% of their inventory in FY09)
- Inspection of Completed Works (ICW), Flood Damage Reduction and Federally Authorized Shore Protection Systems and the Levee Safety Program. These programs will be based on systems approach using both the System codes and the 4-digit HUC codes and is to be budgeted accordingly. Districts will indicate in the remarks, by state

the total projects in these programs under its respective System and HUC code, the total to inspect during this budget cycle and the funds required for each state. It is not expected that 100% will be in the initial increment. See Annex C – Operations and Maintenance – Inspection of Completed Works and Levee Safety. The following items may be included in the initial increment:

- General program coordination and management requirements;
- Routine and Periodic inspections at pre-defined inspection intervals for Federal and Non-Federal Systems based upon current program implementation guidance and regulations;
- Pre-storm inspections of Federally authorized Hurricane Shore Protection Systems;
- Pre-inspection preparation and post inspection reporting and notification requirements;
- Any coordination efforts with public sponsors or stakeholders;
- Technical review and approval of sponsor proposed alternations, improvements, excavations or construction which are in accordance with Corps policy and guidance for such proposals
- Routine updates of National Levee database and project O&M manuals.
- 2nd round risk assessments, management and coordination. (Initial assessments are to be centrally funded by HQUSACE). Risk Assessment for non-Federal Projects only if directed and funded by Congress;

- Scheduling of reservoir operations, including necessary instrumentation, etc.
- Cooperative gauging program costs
- Water management program costs
- Critical sedimentations surveys – limited to projects where sedimentation would have imminent adverse impact on flood control storage
- Update of water control manuals, limited to coordination, and dam tender instruction costs
- Studies and surveys for updating flood damage functions for oldest 10% of projects
- Legally required water quality modeling
- O&M for environmental compliance for threatened/endangered or other federally recognized significant species
- Update drought contingency management plans in areas of severe droughts.

g) Joint Activities - Joint Costs - All non-Cat/Class 300 projects, activities previously considered as "Joint Activities" will be included in the project's predominant business line. See Annex C, Paragraph C-2.3.b. Joint Activities – Joint Costs for additional guidance.

c**.** Additional Increments. Additional increments are prioritized, and then added to the "Initial" program. Priorities are based on there relative efficiencies and effectiveness in accomplishing approved performance objectives, goals and missions.

1. Investigations (I)

a) All additional budget requests for studies, or meaningful portion of PED and new phases of studies, will be included in a MSC prioritized program. Additional amounts and priorities must be justified based on the performance measures and ranking criteria displayed in Table III-1. There may be more than one budget line item for a study, project, or separable element meeting the criteria for an increment. Example: If a contract and significant staff time were required to meet the "optimal" schedule in the PMP, there may be two funding lines for that project in the increment. For any exceptions, the rationale must be documented in the remarks column.

b) See Definition/Glossary section for Investigation Increments for definitions.

c) Systems or Watershed studies and/or projects will be given priority in accordance with the following criteria:

(1) Requires consideration of water resources development and management in the context of multiple purposes rather than single purposes, and, thus, facilitates the search for comprehensive and integrated solutions.

(2) Improves opportunities for public and private groups to identify and achieve common goals by unifying on-going efforts and leveraging resources.

(3) Identifies a combination of recommended actions (a System or Watershed Management Plan) to be undertaken by various partners and stakeholders in order to achieve local, tribal, regional, and national water resources management goals identified in the study and may or may not identify further budgetable Corps studies or implementation projects.

(4) Leverages resources, including cost shared collaboration, and integrates programs and activities within and among Civil Works programs, and with other Federal, tribal state and non-governmental organizations, to improve consistency and cost effectiveness;

2. Construction (C)

a) Dam Safety work items identified as DSAC = 3 shall be ranked within Increment 2. Dam Safety work items identified as DSAC = 4 and 5 shall be ranked as lower, capability level funding priorities.

b) For shore protection projects that require beach re-nourishment in the PY, the necessary Federal funds should be identified, along with all associated performance data, and assigned an increment code of “9”.

c) Contracts.

(1) All construction contracts will be funded in accordance with Construction Increments - see Definition/Glossary section.

(2) Additional Increment(s). Additional funding increments are for each project in support of logical project execution which contributes to the program goals. The last-added funding increment for each project, together with the Initial Increment and any previously added increments, will add to the project capability.

(3) Each budget line item representing a contract will include associated management, real estate and contract (with associated administration requirements) costs. Additional increments must be clearly shown what the additional funding would accomplish as shall be described in the REMARKS field. Funding decisions must be based on performance metrics for that project.

3. Operations and Maintenance (O&M)

a) Use Increment 2 to account for critical non-routine activities on projects. The total of Increment 1 plus Increment 2 represents the minimal program and is limited to 75% of the amount in Table C 2.2 by MSC. See Definition/Glossary section for O&M Increments.

b) Additional increments (up to 3 more beyond initial) for both operations and maintenance may be included but it must be clearly shown what the additional funding would accomplish. In general, initial increment requests will be to continue existing contract or proceed at existing level of effort, and additional increments would be to accelerate the work due to criticality of the effort. For example, a budget request of $x for maintenance (or operations) in Increment 1 allows operation at 80% of design and another request of $y for maintenance (or operations) in Increment 2 brings operation up to 95% of design. By considering the additional 15% of design performance with the average annual damages and number of people in the floodplain, a relative ranking of this project can assigned (both at the MSC and finally at the HQ levels).

c) Joint Costs - See Annex C, Paragraph C-2.3.b. Joint Activities – Joint Costs for additional guidance.

d) For projects, or segments of projects, that have dam safety issues, special effort should be made to ensure that all funding requests are prioritized based on risk and reliability. Major studies, repairs, monitoring, instrumentation, modifications and rehabilitation should be prioritized as part of the MSC Portfolio Risk Assessment screening (*PRA*). The results of the *PRA* screening should include rankings (*DSAC* Classification) based on probability of failure, human risk and economic risk; an estimate of annual funding requirements for the Seepage and Stability Wedge funds for FY09-FY14; and, lists of risk reduction for major types of problems. The funding for these activities has been moved from O&M to Construction. Normal O&M activities that impact on the safety of the structure but are not specific dam safety activities (WCC=60233) should continue to requested in O&M.

e) Inspection of Completed Works (ICW), Flood Damage Reduction and Federally Authorized Shore Protection Systems and the Levee Safety Program. Include additional program requirements not included in the initial increment and prioritize accordingly.

III-6. Data Required.

The data required for ranking PY budget requests as the national budget will be built using criteria provided in this annex and information contained in the F&CSDR Business Line spreadsheet as provided by each MSC.

DEFINITIONS. The definitions for individual data elements are on the "Definitions" tab of the spreadsheet. Data elements required for the FY09 budget submission are contained in the “Criteria Matrix “tab.

May 07 FDR
spreadsheet.xls